

# FUEL CELL AND WATER VAPOR PERMEABLE MEMBRANE USED THEREIN

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## Abstract of JP2002100384

**PROBLEM TO BE SOLVED:** To realize enough humidification in a humidifying part of a fuel cell without changing the oxygen concentration in the air supplied to the cell.  
**SOLUTION:** The fuel cell comprises a cell part 1 for the cell reaction and the humidifying part 2 on the air side. The humidifying part 2 is constituted with a raw material gas channel 21 for introducing a raw material gas, a discharge gas channel 22 for introducing a discharged gas from the cell part 1, and a water vapor permeable membrane 23 for separating the two channels. The membrane 23 comprises a specific water-soluble polymer with a high hydrophilicity, such as a water-soluble polymer with a metal salt of carboxyl as a functional group in no less than 70 weight % filled in pores of a porous membrane. The membrane permits only water vapor to permeate at high permeability, and does not permit the other gases except for the water vapor.

